

Village of Plover  
Village of Whiting

*Business 51*

# CORRIDOR STUDY

Executive Summary



*Business 51 Corridor Study*  
**EXECUTIVE SUMMARY**

1: Project Summary	1
2: Reconstruction Alternatives Considered	5
3: Recommended Alternative	9
4: Preliminary Project Costs	15
5: Project Schedule	17

# TABLE OF CONTENTS

# 1 *Project* SUMMARY

The Wisconsin Department of Transportation (WisDOT) is working with the villages of Plover and Whiting to determine roadway reconstruction improvement alternatives for a 3.5-mile segment of Business 51 (Post Road).

The project area is located along a commercial corridor that runs north and south through the villages. It currently serves an average weekday traffic volume ranging between 13,800 and 20,400 vehicles.

This study analyzes the existing and future conditions along Business 51 and recommends improvements to enhance safe, efficient, multimodal transportation for the next 30 years. When the roadway reconstruction process is completed, it will enable the villages of Plover and Whiting to accept the jurisdictional transfer of Business 51 from WisDOT. The roadway will then become a local street with local control.



*The study project area is a 3.5-mile corridor that runs north and south through the villages of Plover and Whiting.*

During 2002 and 2003, WisDOT officials and Plover and Whiting village leaders conducted the Business 51 Corridor Study. The study combined field observations, technical analysis and public input to evaluate roadway conditions and make recommendations for future improvements.

In 2004 the study team finalized the project report documenting the study's findings and recommendations.

An advisory committee of citizens, business owners and elected officials acted as a sounding board for Business 51 project issues and served as a conduit for citizen communication. The study team invited residents, public officials, business and property owners to three public information meetings to provide updates on the study and to let attendees give input on the alternatives proposed for the roadway. The team distributed two project-specific newsletters to keep the public informed.

Representatives from Whiting and Plover also met individually with property owners along the corridor and with village boards and plan commissions to seek concurrence and input on the recommended improvements.

The team also studied existing and future traffic operations along the corridor. The analysis determined that through-traffic travel time is not a major concern for Business 51 under existing conditions. Travel speed studies showed that the average northbound and southbound travel speed was 32 mph during morning and afternoon peak travel hours, including delays at intersections. However, solutions are needed to address the following issues:

- Vehicles have a difficult time accessing Business 51 from driveways and cross streets during peak travel periods



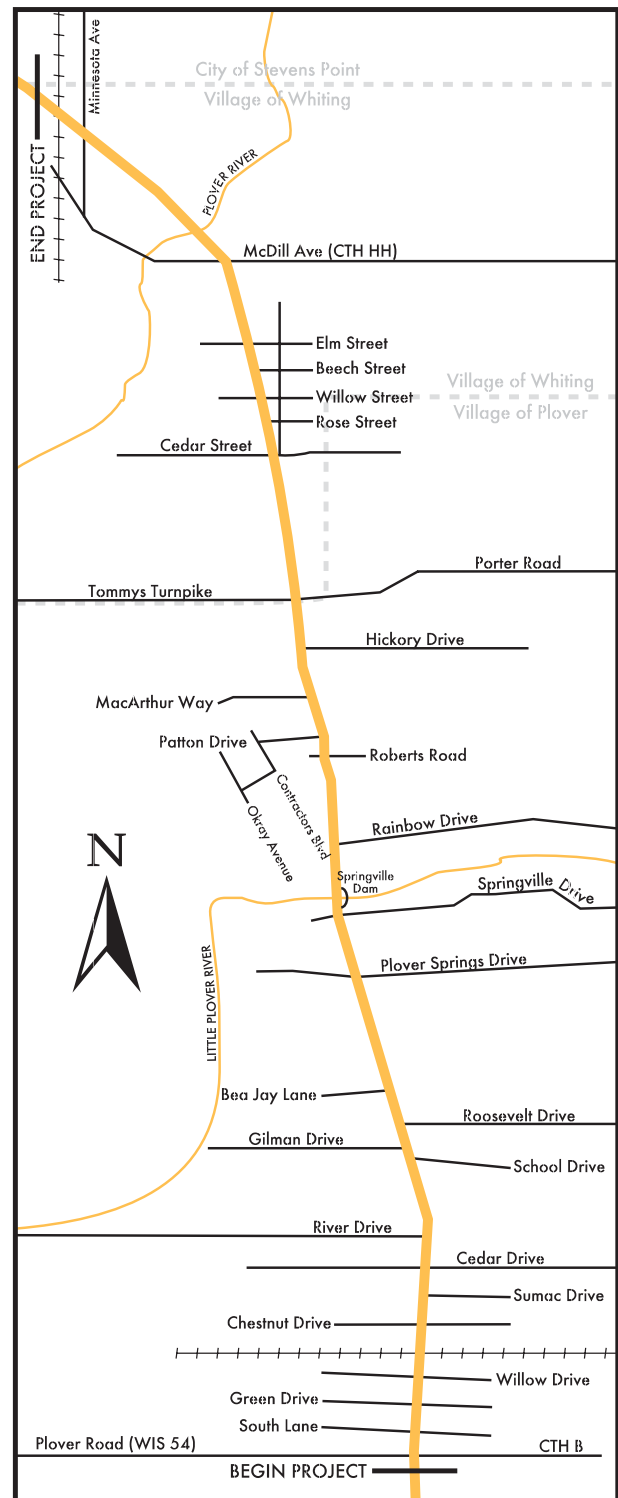
*The study team invited citizens to three public information meetings during the study.*

because it is difficult to find a gap in through-traffic.

- Future development along the corridor is expected to increase traffic volumes. For the year 2030, traffic is projected to increase by 70 percent to 99 percent, ranging between 29,600 vehicles on an average weekday

south of Plover Springs Drive and 34,600 vehicles south of McDill Avenue (County HH).

- The 3.5-mile study area comprises 28 cross streets and 152 driveways. This means, on average, a vehicle might be entering or leaving Business 51 every 85 feet throughout its length. As a result, the large number of cross streets and driveways (many without exclusive turn lanes or traffic signals) creates turning-movement conflicts and safety concerns. This situation is expected to worsen as the projected traffic volume increases.
- More than 54 percent of the 157 crashes reported along Business 51 between 1998 and 2001 occurred at stop-controlled intersections or midblock driveway locations. Many of these crashes involved drivers at cross streets or driveways attempting to make left turns onto Business 51.
- The existing Business 51 roadway has limited pedestrian and bicycle facilities. Sidewalk is provided on the east side of Business 51, but is intermittent on the west side. The undivided roadway lacks pedestrian refuge areas, making it difficult for pedestrians to cross all four lanes of through-traffic at non-signalized intersections. Also, Business 51 does not provide bicycle lanes and cyclists must compete for space with cars.



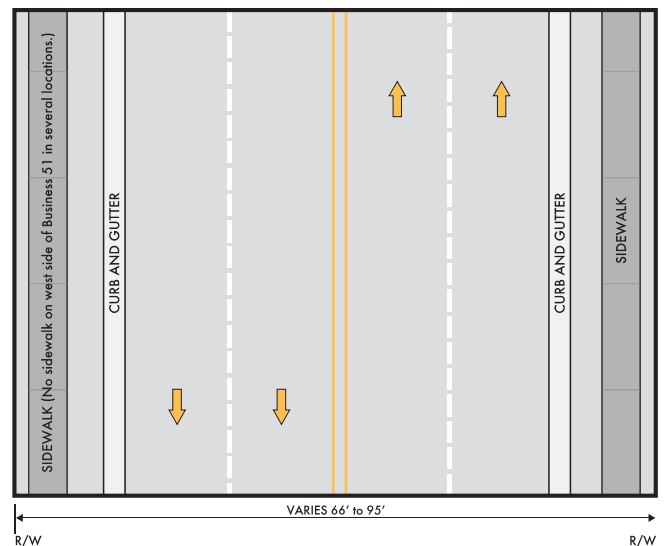
*Business 51 Corridor Study project area*

# 2 *Reconstruction Alternatives* **CONSIDERED**

Using field observations, data collection, and input from residents and an advisory committee, the Business 51 study team proposed and evaluated several alternatives for the reconstruction of the corridor. The alternatives range from taking minor action to engaging in major reconstruction efforts.

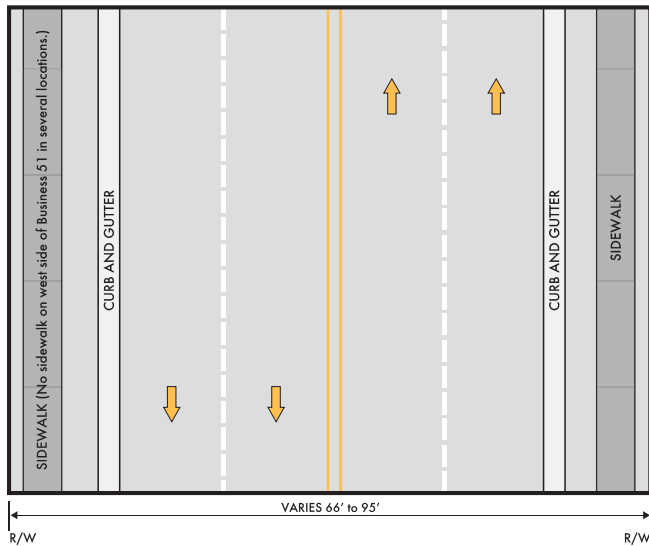
- **Alternative 1** –No Build
- **Alternative 2** –Four-lane undivided with “spot” improvements
- **Alternative 3** –Five-lane, two-way, left-turn lane (TWLTL)
- **Alternative 4** –Four-lane divided roadway
- **Alternative 5** –Combination five-lane TWLTL and four-lane divided roadway

The alternatives were described and illustrated as follows.



### ***Reconstruction Alternative 1 – No Build:***

Business 51 would remain a four-lane undivided roadway with no on-street parking. Business 51 would be resurfaced without widening the roadway or constructing any intersection-capacity improvements. Although this alternative would be the least expensive, it does not address the corridor study's purpose and goals.

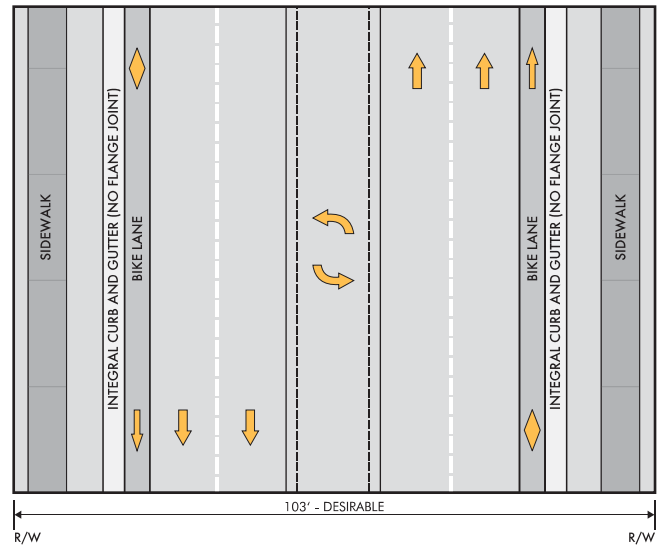


### ***Reconstruction Alternative 2 – Four-lane undivided with “spot” improvements:***

This alternative would reconstruct Business 51, keeping it a four-lane, undivided roadway, adding improvements at warranted intersections.

Although the proposed intersection improvements would enhance traffic operations at intersections, turning conflicts at non-signalized intersections and drive-ways would remain.

The study team ruled out this alternative as a sole option; however, traffic studies the team conducted in association with this alternative were useful to determine intersection improvements for other build alternatives.



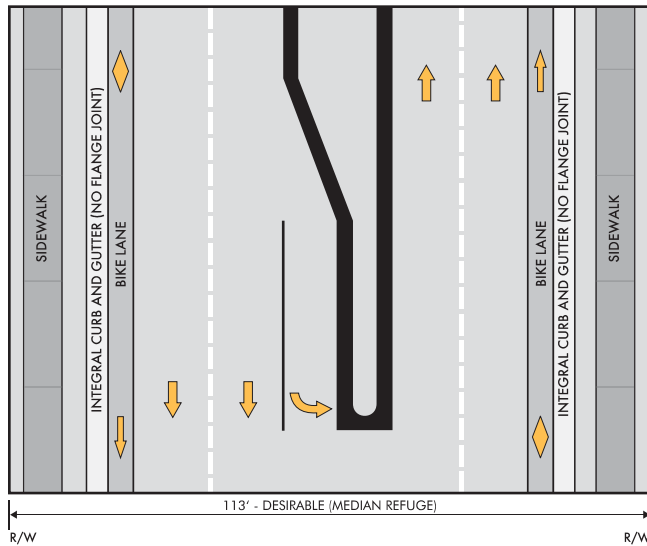
### ***Reconstruction Alternative 3 – Five-lane, two-way left-turn lane (TWLTL):***

This alternative would involve reconstructing Business 51 with two traffic lanes in each direction; a middle, two-way, left-turn lane; and on-street bike lanes and new sidewalks on both sides of the street.

Construction of a five-lane TWLTL on Business 51 would remove left-turn vehicles from through lanes, which would help maintain through-traffic travel times and reduce rear-end and sideswipe crashes.

The study team dismissed the alternative because unlimited access to businesses and cross streets would result in increased traffic conflicts and safety issues under future traffic conditions for vehicles and pedestrians.

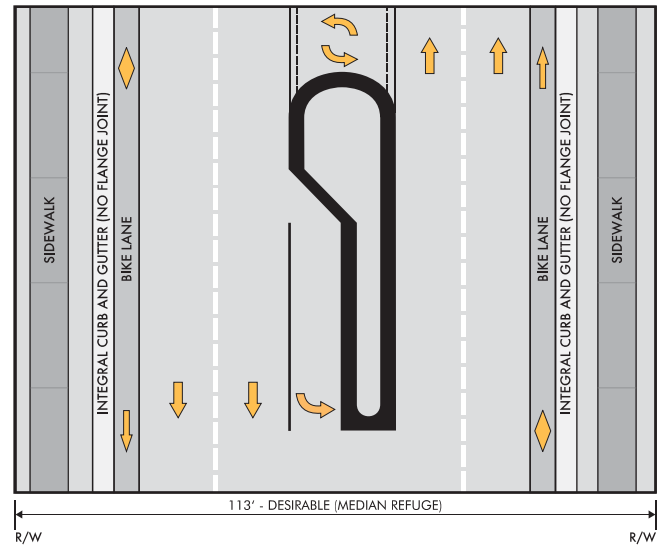




**Reconstruction Alternative 4 – Four-lane divided roadway:** This alternative would reconstruct Business 51 with two traffic lanes in each direction; a median wide enough to provide exclusive left-turn lanes and U-turns; and sidewalks and on-street bike lanes on both sides of the street.

A four-lane divided roadway is the recommended alternative because it best meets the goals and objectives for the project.

By reducing turn conflicts at driveways and cross streets, this alternative provides the best access management along the corridor and the highest level of safety. In addition, it would allow for the construction of dedicated left-turn lanes and provide safe pedestrian refuge in the center of the roadway at signalized and non-signalized intersections.



**Reconstruction Alternative 5 – Combination five-lane TWLTL and four-lane divided roadway:** Reconstruct Business 51 with two traffic lanes in each direction; a middle two-way, left-turn lane or median; and on-street bike lanes and sidewalks on both sides of the street.

Because the study team determined that the TWLTL does not adequately address traffic and safety in all locations, this alternative was dismissed.



# 3 *Recommended* **ALTERNATIVE**

WisDOT, Plover and Whiting representatives recommend Alternative 4: reconstructing Business 51 as a four-lane divided roadway with two lanes of traffic in each direction. Sidewalk and bicycle lanes will be incorporated on both sides of the road and a raised median wide enough to provide exclusive turn lanes and U-turns will be constructed.

The decision to recommend Alternative 4 was reached after an extensive public involvement effort that included three public information meetings, more than 40 meetings with landowners along the corridor, and numerous plan commission, village board and advisory committee meetings.

Construction on the roadway is expected to begin in 2011 and will occur throughout six segments beginning at the north end in Whiting. Construction is expected to be completed in 2016. The recommended alternative will provide the following benefits.



*Alternative 4 allows for aesthetic treatments to be incorporated into the roadway that will improve the corridor's physical appearance.*

- The raised median will be wide enough to provide safe refuge for cross street traffic and to facilitate U-turns.
- Aesthetic treatments such as decorative lighting and landscaping, and "gateway" features can be incorporated to improve the physical appearance of the corridor.

## POST ROAD: ALTERNATIVE 4



Post Road looking south to Willow Street



Post Road looking north to Roosevelt Road

- Dedicated left-turn lanes at median openings will remove slowing vehicles from traffic, and midblock median openings will control access for left-turning vehicles.
- Vehicle-turning conflicts from minor cross streets and driveways will be minimized.
- Cross street and driveway access at median openings will be improved because motorists will be able to seek gaps in one direction of traffic at a time.
- Driveway median openings can be constructed at select locations.
- Vehicle conflicts will be reduced by consolidating and reducing driveway access and eliminating some cross street connections.
- On-street bike lanes on both sides of the street will encourage commuter bicyclist to use the corridor and will provide a safer connection to the Green Circle Trail.
- Safety and efficiency for pedestrians, bicyclists and vehicles will be improved, which will attract users to the corridor and encourage business retention and development.
- The raised median will provide safe refuge for pedestrians who are crossing the roadway at all cross streets and major intersections.
- The reconstruction alternative will complement future, planned land use for the area.
- Alternative 4 will not affect any future possible accommodations for transit.

## Key Elements

The following are the key elements of the recommended roadway alternative:

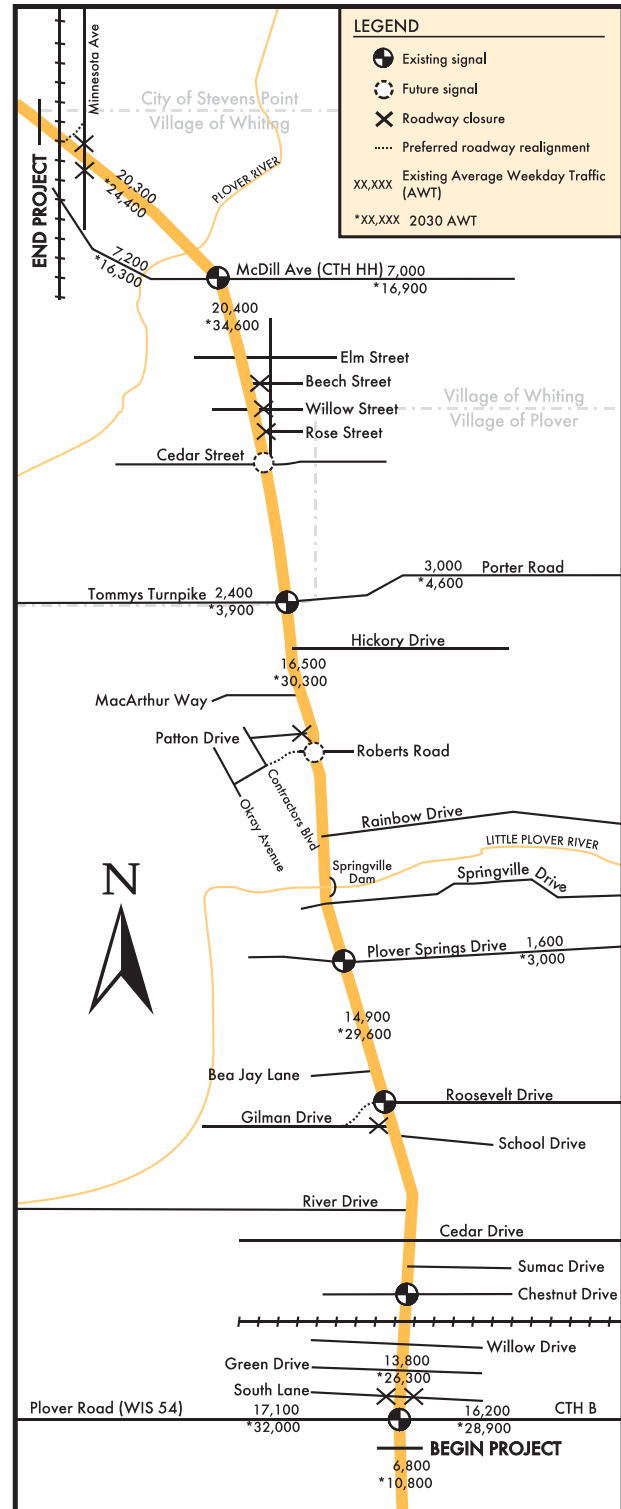
- Two 12-foot lanes in each direction.
- 24-foot-wide median with 18-inch curb and gutter.
- 5-foot bike lanes in both directions and bicycle-safe storm sewer inlet covers.
- 8.5-foot terrace area.
- 6-foot wide sidewalks on both sides of the roadway.

Alternative 4 will also include the reconstruction of the following two structures:

**Bridge at McDill Pond:** The existing 72-foot-wide bridge at McDill Pond would be replaced with a bridge varying in width from 96 feet to 102 feet.

The wider bridge will include 12-foot travel lanes, a variable-width raised median, 5-foot bike lanes in each direction, a 5-foot paved terrace and 6-foot sidewalks on both sides on the bridge. The new bridge will be approximately 130 feet long.

Design features to minimize environmental impacts to McDill Pond will be considered during the environmental documentation process, when residents also will have the opportunity to submit input.



*Business 51 proposed roadway improvements*

**Springville Dam:** A study independent from the Business 51 Corridor Study recommends that the Springville Dam be reconstructed. The median over the dam will be reduced to minimize environmental impacts to the Little Plover River.

Other elements of the project include the following installations:

- New traffic signals at Roberts Road and Cedar Street, and improved signal capabilities at other intersections.
- Overhead street lights.
- Storm sewer trunk, laterals and structures.
- Railroad crossing improvements to enhance safety such as new crossing surfaces, signal lights and gates at both crossings.

## Optional Improvements

In addition to the reconstruction of the roadway, the following traffic operation improvements and corridor streetscape features are recommended, but optional:

- Bury aboveground utilities.
- Realign Patton and Gilman drives to intersect Business 51 at Roberts Road and Roosevelt Drive, respectively.
- Incorporate streetscape features to improve roadway aesthetics and encourage new development.



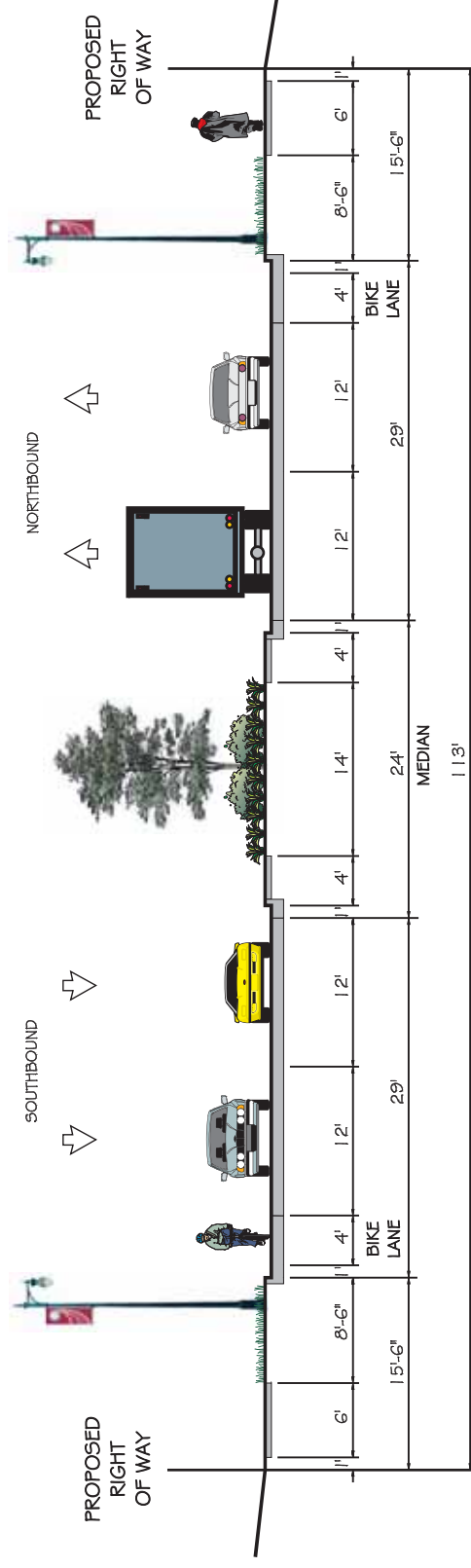
*Alternative 4 would realign Gilman Drive and Patton Drive so that both street intersections would be signalized.*

## Right of Way

The existing public right of way along Business 51 varies in width from 66 feet to 95 feet. Alternative 4 requires a typical right of way width of 113 feet (right of way at the south end of the project area will be wider due to the construction of two southbound left-turn lanes at County B). An estimated 11.5 acres of land will be acquired along the corridor for permanent right-of-way use, which includes 19 commercial buildings and eight residential buildings.

# PROPOSED 4-LANE, DIVIDED TYPICAL MIDBLOCK SECTION

## POST ROAD (BUSINESS 51) • WHITING AND PLOVER, WIS.

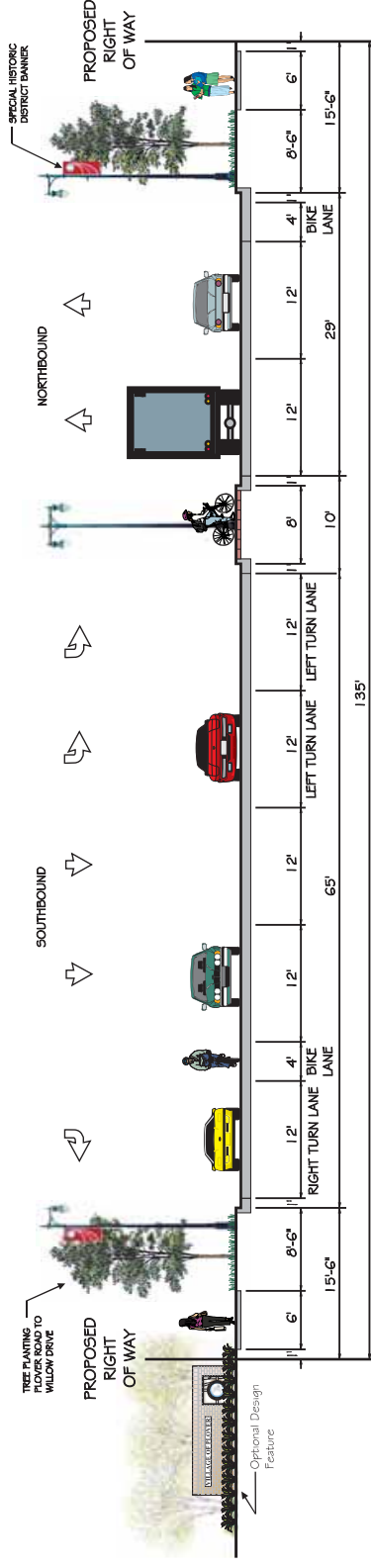


The typical midblock section includes two traffic lanes in each direction; on-street bike lanes and new sidewalks on both sides of the street. The raised median is wide enough to provide left turn lanes at all cross-street and driveway median openings and will accommodate U-turns. Aesthetics treatments such as decorative lighting and landscaping, and "gateway" features can be incorporated into the median to improve the physical appearance of the corridor. The medians will also provide safe refuge for pedestrians and bicyclist crossing midblock.



# PROPOSED 4-LANE, DIVIDED SECTION AT PLOVER ROAD (WIS 54 / COUNTY B) LOOKING NORTH

POST ROAD (BUSINESS 51) • WHITING AND PLOVER, WIS.



The typical section at major cross street intersections will vary to provide for additional turn lanes. At Wis 54/County B, additional right and left turn lanes are proposed to be constructed. The typical section includes two through traffic lanes in each direction; on-street bike lanes and new sidewalks on both sides of the street. The median at intersections will provide safe refuge for crossing pedestrians and bicyclists and provides opportunities for aesthetics treatments.

# 4 *Preliminary* PROJECT COSTS

The preliminary cost estimate for the recommended roadway reconstruction alternative is approximately \$36 million. This estimate includes:

- Environmental documentation
- Roadway design
- Real estate
- Utility relocation
- Railroad-crossing improvements
- Construction

See Page 16 for a chart that outlines the project costs annually.

Real estate costs include acquisitions of property – including the loss of parking – and relocation costs.

The study team recommends side street relocations to improve cross-street access at the two intersections where future traffic signals are to be installed. However, the

relocations are expected to be funded through local sources.

Optional improvements could cost an additional \$6.5 million. The estimated costs are as follows:

- Side road relocations (with utility costs): \$1.7 million
- Streetscape features: \$4.1 million
- Burying aboveground utilities: \$700,000

The reconstruction of Business 51 has been divided into six construction segments beginning at the north end in Whiting. By dividing the project into segments, the construction work is kept to manageable levels for each construction season. This also reduces driver inconvenience by allowing for diversion routes.

Construction on the project corridor is estimated to take six years, from 2011 to 2016.



## SUMMARY OF PROJECT COSTS – CONCEPTUAL PLAN

SEGMENT	SEGMENT DESCRIPTION	Design Costs	WisDOT Review Costs	Real Estate Costs	Utility Costs Compensable	Railroad Costs	Construction Costs	(YR2004\$) TOTAL COSTS	CONST. YEAR
1	North Project Limit To N. of McDill Pond (.25 Mi)	\$156,000	\$16,000	\$131,000	\$105,000	\$180,000	\$1,165,000	\$1,753,000	2011
2	N. of McDill Pond to Elm Street (.49 Mi)	\$633,000	\$63,000	\$522,000	\$7,500	N/A	\$4,724,000	\$5,949,500	2012
3	Elm Street to Tommy's Turnpike (.56 Mi)	\$399,000	\$40,000	\$2,942,000	\$7,500	N/A	\$2,977,000	\$6,365,500	2013
4	Tommy's Turnpike to Bea-Jay Road(1.02 Mi)	\$878,000	\$88,000	\$1,716,000	\$10,000	N/A	\$6,552,000	\$9,244,000	2014
5	Bea-Jay Road to Green Drive (.84 Mi)	\$580,000	\$58,000	\$5,025,000	\$10,000	\$180,000	\$4,334,000	\$10,187,000	2015
6	Green Drive to South Project Limits (.28 Mi)	\$198,000	\$20,000	\$72,000	\$5,000	N/A	\$1,479,000	\$1,774,000	2016
	TOTAL	\$2,844,000	\$285,000	\$10,408,000	\$145,000	\$360,000	\$21,231,000	\$35,273,000	

Costs and construction years are preliminary and are subject to change.

# 5 *Project* SCHEDULE

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Corridor Study															
Environmental Documentation															
Preliminary Design															
Final Design															
Right of Way															
Utility Relocation															
Construction															

Time line is preliminary and is subject to change

The corridor study is the first step in the roadway reconstruction process. The next phase will be environmental documentation followed by preliminary engineering.

### Business 51 Corridor Study Advisory Committee

- Chuck Kell, Whiting village president
- Daniel Schlutter, Plover village president
- Dan Mahoney, Plover village administrator
- Orville Damrau, village of Plover
- Tom Davies, village of Plover
- Ken Lepak, property owner/developer
- Kathy Nations, property/business owner
- Robbie Nelson, property/business owner
- Larry Huebner, citizen
- Chris Northwood, property/business owner/real estate agent
- Fred Steffen, property/business owner/ real estate agent

Wisconsin Department of Transportation District 4  
Wisconsin Rapids, Wisconsin

HNTB Corp.  
Milwaukee and Madison, Wisconsin

# ACKNOWLEDGEMENTS

James Wendels  
WisDOT District 4  
1681 2nd Ave. South  
Wisconsin Rapids, WI 54495  
**phone** 715.421.8342  
**e-mail** [james.wendels@dot.state.wi.us](mailto:james.wendels@dot.state.wi.us)

WHO TO CONTACT